Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A processor-based <u>image acquisition and processing</u> system <u>comprising a lens and image sensor for acquiring a digital image, a processor, and one or more digital data storage media having code embedded therein, the processor</u> operating according to <u>the</u> digitally-embedded programming instructions and communicating with <u>the</u> one or more digital data storage media for classifying and archiving images including face regions that are acquired with an image acquisition device, the programming instructions comprising:

~~(1)~~ a face detection module for identifying a group of pixels corresponding to a face region within digital image data acquired by the acquisition device;

~~(2)~~ a normalization module for generating a normalized face region from said face region;

~~(3)~~ face recognition module for extracting a set of values of face classifier parameters from said normalized face region, said set of face classifier parameter values being collectively known as a faceprint associated with said normalized face region;

~~(4)~~ a workflow module for comparing said extracted faceprint to a database of archived faceprints previously determined to correspond to one or more known identities, and for determining based on the comparing whether <u>a</u> ~~the~~ new faceprint corresponds to any of the one or more known identities, and for associating the new faceprint and normalized face region from which said faceprint is derived with a new or known identity within a database comprising other data corresponding to the archived faceprints and associated parent images for performing further comparisons with further faceprints;

~~(5)~~ a database module for archiving the data according to the associating by the workflow module within one or more digital data storage media; and

~~(6)~~ a set of user interface modules for obtaining user input in the classifying of faceprints and their associated normalized face regions and parent images<u>; and</u>

wherein one or more archived faceprints have been previously determined to correspond to the one or more known identities, and the comparing by the workflow module comprises determining proximities of the values of the face classifier parameters of the new face print image with values corresponding to the one or more archived faceprints, and

wherein the determining by the workflow module comprises a further confirmation to determine whether the new faceprint corresponds to a known identity when comparisons of the face classifier parameter values of the first faceprint with multiple archived faceprints corresponding to a same known identity result in at least one determination of an identity match and at least one determination that the identities do not match.

2. (original) The system of claim 1, wherein the archiving further for enabling further comparisons with further faceprints and for recalling the faceprints and their associated normalized face regions and parent images.

3. (original) The system of claim 1, wherein the archiving further comprises grouping the new faceprint with a new or prior face class defined by sets of face classifier parameter boundary values corresponding to the new or known identity.

4. (currently amended) The system of claim 1, wherein the identifying by the face detection module further comprises presenting a thumbnail representation of a the face candidate region, and receiving user input relevant to the identifying.

5. (original) The system of claim 1, wherein the comparing by the face recognition module further comprises presenting to the user one or more previously-archived faceprints, or thumbnails thereof, previously determined to correspond to one or more known identities, and receiving user input relevant to the comparison with the new faceprint.

6. (original) The system of claim 1, wherein the programming instructions further comprise providing interactive access to the user of data associated with the identities, faceprints, associated normalized face regions or parent images acquired with a digital camera, or combinations thereof.

7. (original) The system of claim 6, wherein the data comprises identity data, relationship data, personal data, group membership data, events and occasions data, location-based data, image category data or data stored within image metadata, or combinations thereof.

8. (original) The system of claim 6, wherein the data comprises image data, identity data or face recognition data, or combinations thereof.

9. (original) The system of claim 1, wherein the programming instructions comprise instructions for receiving data management editing from the user regarding image data, identity data or face recognition data, or combinations thereof.

10. (original) The system of claim 1, wherein the programming instructions comprise instructions for receiving data management editing from the user regarding statistical thresholds utilized in the comparing by the face recognition module.

11. (original) The system of claim 10, wherein the programming instructions further comprise instructions for receiving data management editing from the user regarding automated learning or adaptive recognition enhancement processes, or both.

12. (original) The system of claim 1, wherein the programming instructions comprise instructions for providing utilization access by the user of added value services tools.

13. (original) The system of claim 12, wherein the added value services tools comprise slideshow generation tools, print tools, web publisher tools, face detection tools, face

recognition tools, or image enhancement tools based on the presence and location of faces in an image, or combinations thereof.

14. (original) The system of claim 1, wherein the comparing by the face recognition module further comprises receiving and processing user input regarding whether the faceprint and associated normalized face region corresponds to a known identity or matches a previously-archived faceprint, or both.

15. (original) The system of claim 1, wherein the database module further for associating the new face print image with a new or known identity by grouping the new face print image with a new or prior face class defined by range values of one or more face classifier parameters for performing further comparisons with further faceprints and for recalling the faceprints.

16. (original) The system of claim 1, wherein the programming instructions are stored on or accessible by a stand alone processor-based device configured for receiving raw image data from a digital camera, and the device being coupled with or including user interface hardware, and upon which the classifying is performed.

17. (original) The system of claim 1, wherein the programming instructions are stored at least in part on an embedded appliance for performing some image classifying-related processing prior to outputting processed image data to a further processor-based device upon which the classifying is further performed.

18. (original) The system of claim 17, wherein the embedded appliance comprises a digital camera.

19. (original) The system of claim 18, wherein the digital camera comprises a dedicated digital camera or a camera-capable handheld pda or phone, or a combination thereof.

20. (original) The system of claim 1, wherein the programming instructions are stored at least in part on a processor-based device connected to a network for performing some image classifying-related processing on the device prior to outputting processed data to a back-end server upon which the classifying is further performed.

21. (original) The system of claim 1, wherein the identifying by the face detection module or the comparing by the face recognition module, or both, comprise receiving and utilizing user input confirmation.

22. (original) The system of claim 1, wherein the identifying by the face detection module or the comparing by the face recognition module, or both, are configured for auto-processing subject to selective disablement of the auto-processing by a user.

23. (original) The system of claim 1, wherein the identifying by the face detection module applies automatic face region identification when a detection probability is calculated to be above a detection probability threshold or the comparing by the face recognition module applies automatic identity recognition when a matching probability with a prior faceprint is calculated to be above a matching probability threshold, or both.

24. (original) The system of claim 23, wherein the detection probability threshold or the matching probability threshold, or both, are adjustable.

25. (original) The system of claim 24, wherein the detection threshold or the matching threshold, or both, are adjustable by a user, a manufacturer, or an adaptive learning program of the system, or combinations thereof.

26. (original) The system of claim 1, wherein the programming instructions are stored on or accessible by processor-based components within a digital camera upon which the classifying is performed.

27. (currently amended) ~~A processor-based system operating according to digitally-embedded programming instructions and communicating with one~~ <u>One</u> or more <u>processor-readable</u> digital data storage media <u>having programming instructions embedded therein for programming a processor to classify</u> ~~for classifying and archiving~~ images including face regions that are acquired with an image acquisition device, the programming instructions comprising:

~~(a)~~ a workflow module providing for the automatic or semiautomatic processing of identified face regions within digital images from which normalized face classifier parameter values are extracted and collectively referred to as a faceprint, the processing comprising:

~~(i)~~ comparing said extracted faceprint to a database of archived faceprints previously determined to correspond to one or more known identities,

~~(ii)~~ determining based on the comparing whether <u>a</u> ~~the~~ new faceprint corresponds to any of the one or more known identities, and

~~(iii)~~ associating the new faceprint and <u>a</u> normalized face region from which said faceprint is derived with a new or known identity within a database comprising other data corresponding to the archived faceprints and associated parent images for performing further comparisons with further faceprints, ~~such as~~ to permit data corresponding to the new faceprint and its associated parent image to be archived according to the associating by the workflow module within one or more digital data storage media; and

~~(2)~~ a set of user interface modules for obtaining user input in the classifying of faceprints and their associated normalized face regions and parent images<u>; and</u>

<u>wherein one or more archived faceprints have been previously determined to correspond to the one or more known identities, and the comparing by the workflow module comprises determining proximities of the values of the face classifier parameters of the new face print image with values corresponding to the one or more archived faceprints, and</u>

<u>wherein the determining by the workflow module comprises a further confirmation to determine whether the new faceprint corresponds to a known identity</u>

when comparisons of the face classifier parameter values of the first faceprint with multiple archived faceprints corresponding to a same known identity result in at least one determination of an identity match and at least one determination that the identities do not match.

28. (original) The system of claim 27, wherein the archiving further for enabling further comparisons with further faceprints and for recalling the faceprints and their associated normalized face regions and parent images.

29. (original) The system of claim 27, wherein the archiving further comprises grouping the new faceprint with a new or prior face class defined by sets of face classifier parameter boundary values corresponding to the new or known identity.

30. (original) The system of claim 27, wherein the programming instructions further comprise providing interactive access to the user of data associated with the identities, faceprints, associated normalized face regions or parent images acquired with a digital camera, or combinations thereof.

31. (original) The system of claim 30, wherein the data comprises identity data, relationship data, personal data, group membership data, events and occasions data, location-based data, image category data or data stored within image metadata, or combinations thereof.

32. (original) The system of claim 30, wherein the data comprises image data, identity data or face recognition data, or combinations thereof.

33. (original) The system of claim 27, wherein the programming instructions comprise instructions for receiving data management editing from the user regarding image data, identity data or face recognition data, or combinations thereof.

34. (original) The system of claim 27, wherein the programming instructions comprise instructions for receiving data management editing from the user regarding statistical thresholds utilized in the comparing.

35. (original) The system of claim 34, wherein the programming instructions further comprise instructions for receiving data management editing from the user regarding automated learning or adaptive recognition enhancement processes, or both.

36. (original) The system of claim 27, wherein the programming instructions comprise instructions for providing utilization access by the user of added value services tools.

37. (original) The system of claim 36, wherein the added value services tools comprise slideshow generation tools, print tools, web publisher tools, face detection tools, face recognition tools, or image enhancement tools based on the presence and location of faces in an image, or combinations thereof.

38. (original) The system of claim 27, wherein the programming instructions are stored on or accessible by a stand alone processor-based device configured for receiving raw image data from a digital camera, and the device being coupled with or including user interface hardware, and upon which the classifying is performed.

39. (original) The system of claim 27, wherein the programming instructions are stored at least in part on an embedded appliance for performing some image classifying-related processing prior to outputting processed image data to a further processor-based device upon which the classifying is further performed.

40. (original) The system of claim 39, wherein the embedded appliance comprises a digital camera.

41. (original) The system of claim 40, wherein the digital camera comprises a dedicated digital camera or a camera-capable handheld pda or phone, or a combination thereof.

42. (original) The system of claim 27, wherein the programming instructions are stored at least in part on a processor-based device connected to a network for performing some image classifying-related processing on the device prior to outputting processed data to a back-end server upon which the classifying is further performed.

43. (original) The system of claim 27, wherein the programming instructions are stored on or accessible by processor-based components within a digital camera upon which the classifying is performed.

44. (currently amended) A method for classifying and archiving images including face regions that are acquired with an image acquisition device, comprising:

      (a) generating a normalized face region from an identified face region within digital image data acquired by the acquisition device;

      (b) automatically extracting a set of face classifier parameter values, collectively referred to as a faceprint, from the normalized face region;

      (c) automatically comparing said extracted faceprint to a database of archived faceprints previously determined to correspond to one or more known identities;

      (d) determining based on the comparing whether a ~~the~~ new faceprint corresponds to any of the one or more known identities;

      (e) associating the new faceprint with a new or known identity within a database comprising other data corresponding to the archived faceprints and associated parent images for performing further comparisons with further faceprints, ~~such as~~ to permit data corresponding to the new faceprint and its associated parent image to be archived according to the associating by the workflow module within one or more digital data storage media; and

      (f) obtaining user input in the classifying of faceprints and their associated normalized face regions and parent images; and

wherein one or more archived faceprints have been previously determined to correspond to the one or more known identities, and the comparing comprises determining proximities of the values of the face classifier parameters of the new face print image with values corresponding to the one or more archived faceprints, and

wherein the determining comprises a further confirmation to determine whether the new faceprint corresponds to a known identity when comparisons of the face classifier parameter values of the first faceprint with multiple archived faceprints corresponding to a same known identity result in at least one determination of an identity match and at least one determination that the identities do not match.

45. (original) The method of claim 44, further comprising archiving the new faceprint and its associated parent image, according to the associating, within one or more digital data storage media.

46. (original) The method of claim 45, wherein the archiving enables further comparisons with further faceprints and for recalling the faceprints and their associated normalized face regions and parent images.

47. (original) The method of claim 45, wherein the archiving further comprises grouping the new faceprint with a new or prior face class defined by sets of face classifier parameter boundary values corresponding to the new or known identity.

48. (original) The method of claim 44, further comprising interactively accessing data output associated with the identities, faceprints, associated normalized face regions or parent images acquired with a digital camera, or combinations thereof.

49. (original) The method of claim 44, further comprising receiving data management editing input regarding image data, identity data or face recognition data, or combinations thereof.

50. (original) The method of claim 44, further comprising receiving data management editing from the user regarding statistical thresholds utilized in the comparing.

51. (original) The method of claim 50, further comprising receiving data management editing input regarding automated learning or adaptive recognition enhancement processes, or both.

52. (original) The method of claim 44, further comprising providing utilization access output of added value services tools.

53. (original) The method of claim 44, wherein the extracting is performed automatically.

54. (original) The method of claim 44, wherein the comparing is performed automatically.

55. (original) The method of claim 54, wherein the extracting is performed automatically.

56. (original) The method of claim 44, further comprising digitally organizing and selectively recalling said new and archived faceprints and the associated parent images.

57. (original) The method of claim 44, further comprising determining that the face region has a particular pose aspect.

58. (original) The method of claim 57, further comprising completing the recognition process by comparing and determining a match of face classifier parameters with a previously determined known identity sharing a similar pose aspect.

59. (original) The method of claim 44, wherein the generating comprises pose normalizing the identified face region.

60. (new) The system of claim 1, wherein the further confirmation comprises automatically determining that the new face print image corresponds to a know identity based on one or more geometric distance proximities being within a predetermined proximity threshold.

61. (new) The one or more processor-readable digital data storage media of claim 27, wherein the further confirmation comprises automatically determining that the new face print image corresponds to a know identity based on one or more geometric distance proximities being within a predetermined proximity threshold.

62. (new) The method of claim 44, wherein the further confirmation comprises automatically determining that the new face print image corresponds to a know identity based on one or more geometric distance proximities being within a predetermined proximity threshold.